

therefore, have been obvious to use the Reynolds analysis methods on arrays such as those taught by Pease *et al.* Applicants traverse.

Even accepting, *arguendo*, the rejection's interpretation of the references, it is clear that the rejection does not meet the Office's obligation of properly establishing a *prima facie* case of obviousness with respect to the pending claims. As set forth in the MPEP at § 2142, the art, when combined, must provide all of the elements of the claimed invention, a motivation to achieve the invention, and a reasonable expectation of practicing the invention. The rejection is facially insufficient regarding all of these requirements.

As an initial matter, the rejection does not explain how each of the claimed elements is allegedly provided by the cited art. For example, to properly establish a proper *prima facie* obviousness rejection with respect to claim 1, the rejection would have to explain, *inter alia*, how the cited art provides (1) a preselected array of labeled polymers connected to cleavable linkers on a solid substrate; (2) how the art taught cleavage of the labeled polymers from the solid substrate by cleaving the cleavable linkers, thereby creating labeled unbound polymers, and (3) detection of the unbound polymers. Further rejection of claims dependent to claim 1 must explain how each element of each rejected claim is provided by the prior art. Without a clear indication of how the art provides all of the elements claimed in *each* claim, Applicants are neither required, or properly able, to address the rejection. Similarly, because the rejection does not explain how the art can be said to provide the elements of the invention, it is clear that the rejection does not establish an expectation of successfully practicing the invention, given only the cited references and the general state of the art.

More fundamentally, the motivation alleged for combining the references is improperly based upon impermissible hindsight reconstruction of the invention. The rejection alleges that Reynolds taught the synthesis and analysis of molecules from solid substrates, and that Pease *et al.* taught arrays comprising labeled components. From this, the rejection infers that one of skill would have been motivated to use the Reynolds synthesis and analysis methods to analyze cleavage products from an array as taught by Pease because it was known in the art that these techniques were useful in the analysis of oligomers made by solid phase techniques. *See*, Office Action at page 3.

Applicants respectfully submit that the rejection does not explain how the art provides an array of preselected labeled polymers connected to cleavable linkers, cleavage of such polymers, or how the art provides a reason to practice the analysis methods of Reynolds on arrays such as those taught by Pease *et al.*

The only oligonucleotides which appear to have been *labeled* in the Pease *et al.* arrays were labeled to provide a measure of coupling efficiency (*see*, p. 5024, column 1) for the oligonucleotides in the arrays. As described, a fluorescently labeled phosphoramidite was coupled to oligonucleotide chains in one region of the array, and the resulting fluorescence used to measure the percentage of reactive sites which incorporated the labeled phosphoramidite, as compared to a control region which was not exposed to the labeled phosphoramidite (*see, id.*). Cleavage of these labeled nucleic acids would prevent this comparative measurement, destroying the prior art array for its intended purpose. Accordingly, there could have been no reason to practice the Reynolds methods on the Pease arrays. Applicants note that it has long been established that the art cannot be said to suggest a combination where the combination renders the combined prior art unsatisfactory for its intended purpose. *See*, the MPEP at 2143.01 and In re Gordon 221 USPQ 1125 (Fed. Cir. 1984). Accordingly, the art simply cannot be combined in the manner suggested in the rejection. Furthermore, given the coupling efficiency indicated by Pease *et al.* of between 85% and 98%, the reference would have suggested to one of skill that further analysis of the components of the Pease *et al.* arrays would be unnecessary.

The recognition of the advantages provided by an invention does not provide a motivation for achieving the invention. Hindsight recognition that the present invention can be used to determine the composition of polymer arrays provides no basis for establishing why the prior art would have considered such a feature desirable. Indeed, since cleavage of molecules from the arrays in the prior art renders the arrays unsuitable for their intended purpose, there could have been no logical reason to combine the references in the manner suggested, prior to the present invention. As noted in the MPEP, no motivation to combine references can exist where the combination would destroy the function of the material disclosed in the prior art. The rejection must articulate more than a hindsight recognition of advantages described by the Applicants to establish a motivation to combine the elements of the prior art. *See In Re Gordon, supra; see also, Panduit Corp. v. Dennison Mfg. Co.* 227

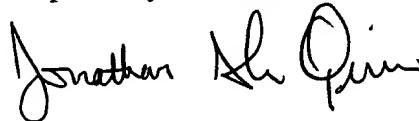
U.S.P.Q. 337, 343 (Fed. Cir. 1985) and In re Fine, 2 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). *See also*, the MPEP at § 2142. Indeed, merely restating the advantages of the invention articulated in the application as a motivation to achieve the invention is the clearest possible example of improper hindsight reconstruction.

Because the rejection does not establish a *prima facie* case of obviousness, and because the rejection is no more than a hindsight recognition of the advantages provided by the invention, the rejection should be withdrawn.

In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (415) 576-0200.

Respectfully submitted,



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